

STANFORD RESEARCH INSTITUTE
Menlo Park, California 94025

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PROGRAM CHARTER:

REMOTE SENSING

by

Dr. Harold E. Puthoff

Mr. Russell Targ

Stanford Research Institute



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ABSTRACT

Recent work in both US and Soviet laboratories indicates mounting evidence for the existence of so-called "parapsychological" or "paraphysical" processes, sometimes called psychoenergetic processes. In the US, recent publications (both classified and unclassified) by Stanford Research Institute (SRI) detail the ability of certain individuals to view, by innate mental processes, remote geographical or technical targets including buildings, roads and laboratory apparatus. In the Soviet Bloc countries, similar research efforts are described in two classified reports, one a DIA document prepared by the US Army Medical Intelligence and Information Agency, the other prepared by Garrett Airesearch as an independent contracted study of Soviet literature.

On the basis of the SRI data and the Garrett and DIA documentation studies, an interdisciplinary R&D program with multiple contractors is proposed. The goal of the program is to establish the necessary data base to evaluate the significance of so-called paranormal processes for intelligence applications, both from the standpoint of feasibility for operational use and from the standpoint of threat analysis.

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PROGRAM CHARTER: REMOTE SENSING

Introduction

Recent publications in both the open and classified literature indicate mounting evidence for the existence of so-called "parapsychological" or "paraphysical" processes. These are sometimes referred to as psycho-energetic or NBIT (novel biophysical information transfer) channels, an acronym coined as a neutral descriptive term free of occult assumptions or biases as to mechanisms.

NBIT processes include:

1. The acquisition and description, by mental means, of remote information blocked from ordinary perception and thought to be secure against such access;
2. The production of physical effects such as the perturbation of instrumentation or equipment which would appear to be well shielded against such interactions.

The literature also indicates mounting evidence for the acceleration of research in both the Western and Soviet Bloc countries in an effort to precipitate a breakthrough. In the West, a large-scale exploratory research effort on NBIT channels has been carried out in the Electronics and Bio-engineering Laboratory of Stanford Research Institute (SRI). Their results have been reported in two major documents, one classified,¹ one unclassified.² Their work dealt primarily with a capability that they call "remote viewing," the ability to view remote geographical locations up to several thousand kilometers. In more than 50 experiments with roughly a dozen subjects, including government scientists sent to examine the experimental protocols, significant results were obtained on the viewing of buildings, laboratory apparatus, and the like. From their work they concluded that

- (a) The phenomenon is not a sensitive function of distance over a range of several km and is still operative over a range of several thousand km (U);
- (b) Faraday cage electrical shielding does not appear to degrade the quality or accuracy of perception (U);
- (c) Most of the correct information pertains to shape, form, color, and material, rather than to function or name, indicating that the function may be mediated primarily by the brain's right hemisphere (U);
- (d) The principal difference between experienced subjects and inexperienced volunteers is not that the latter do not exhibit the faculty but rather that their results are simply less reliable,

¹H. Puthoff and R. Targ, Perceptual Augmentation Techniques, Final Report on SRI Project 3183, December 1, 1975. (Secret)

²H. Puthoff and R. Targ, "A Perceptual Channel for Information Transfer Over Kilometer Distances: Historical Perspective and Recent Research," Proceedings of the IEEE, Vol. 64, No. 3, pp. 329-354, March 1976.

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- indicating that remote viewing may be a latent and widely distributed, though repressed, perceptual ability (U); and
- (e) Subjects trained over a two-year period have performed well under operational conditions (S).

The breadth of work in this area of research in the Soviet Union and Czechoslovakia is detailed in a recent DIA document prepared by the US Army Medical Intelligence and Information Agency.³ It is pointed out that beginning with early work (1930s) in the laboratory of L. Vasiliev⁴ (Leningrad Institute for Brain Research), Soviet efforts in the area of paranormal functioning have concentrated on behavior modification and control (e.g., putting people into a trance at a distance through hypnosis) in contrast to the Western orientation toward remote data acquisition. Also, apparently in keeping with their ideology, the Soviet work is strongly oriented toward the physical aspects of the channel, such as determining the physical mechanisms involved. Indeed, some of the best theoretical work has been done by I. Kogan in his investigation of the ELF (extremely low frequency) electromagnetic hypothesis.⁵⁻⁸ The authors of the DIA document include that the East Bloc parapsychology research effort is now concentrated on the energetics of the problem and is aimed at achieving direct production and control of the energy involved, and that if this goal is achieved it will pose a serious threat to the West.

In a contracted independent study by Garrett Airesearch, a review of Soviet literature on NBIT research led to conclusions similar to those of the DIA document.⁹ The body of the report treats Soviet application of statistical theories, research done on electrostatics, the development of remote sensors, hypothesized carrier mechanisms, human sensitivity to magnetic fields, and performance training to improve NBIT. Their conclusions include (S):

1. The Soviets have done significant work on signal extraction, statistical, and information theory approaches to NBIT processes.

³ L.F. Maire III and Major J.D. LaMothe, MSC, Soviet and Czechoslovakian Parapsychology Research, DIA Document No. DST-1810S-387-75, Sept. 1975. (Confidential)

⁴ L.L. Vasiliev, Experimental Studies of Mental Suggestion, JPRS document No. 59163, 31 May 1973. NTIS. Springfield, Virginia 22151.

⁵ I.M. Kogan, "Is Telepathy Possible?" Radio Eng., Vol. 21, p. 75, Jan. 1966.

⁶ I.M. Kogan, "Telepathy, Hypotheses and Observations," Radio Eng., Vol. 22, p. 141, Jan. 1967.

⁷ I.M. Kogan, "Information Theory Analysis of Telepathic Communication Experiments," Radio Eng., Vol. 23, p. 122, Mar. 1968.

⁸ I.M. Kogan, "The Information Theory Aspect of Telepathy," RAND Publ., Santa Monica, CA. p. 4145, July 1969.

⁹ E.C. Wortz, et al., Novel Biophysical Information Transfer Mechanisms (NBIT), [redacted] Final Report on Contract No. XG-4208 (54-20)75S, Jan. 14, 1976, Airesearch Manu. Co. of Calif., a division of Garrett Corporation. (Secret)

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2. The Soviets have done creditable work on the electrostatics of telekinesis and have probably now turned their attention to the psychophysiological aspects of the phenomenon.
3. The Soviets have an interest in remote physiological monitors, have developed one or two new instruments, and are probably involved in R&D in this area.
4. The Soviets had and probably still have an interest in the physics of NBIT transmission mechanisms and are probably doing research in this area.
5. There is a developing interest in the Soviet Bloc to apply psychophysiological training methods (similar to biofeedback) to develop control over NBIT mechanisms.
6. The Soviets are investigating the psychophysiology of multi-modal, programmed stimulation as a method to entrain physiological rhythms and produce changes in states of consciousness.
7. Finally, they note that open publication of some of the most advanced work in this area has inexplicably stopped. The implausibility of the work itself being stopped has led them to conclude that the work is continuing secretly.

Both the DIA and Garrett reports point to the increasing importance of the NBIT area in Soviet research as indicated recently when the Soviet Psychological Association issued an unprecedented position paper calling on the Soviet Academy of Sciences to step up efforts in this area.¹⁰ They recommended that the newly formed Psychological Institute within the Soviet Academy of Sciences and the Psychological Institute of the Academy of Pedagogical Sciences review the area and consider the creation of a new laboratory within one of the institutes to study persons with unusual abilities. They also recommended a comprehensive evaluation of experiments and theory by the Academy of Sciences' Institute of Biophysics and Institute for the Problems of Information Transmission.

Proposed Program

Following is an outline of a comprehensive program charter designed to establish the necessary data base to evaluate the significance of NBIT processes for intelligence applications, both from the standpoint of feasibility for operational use and from the standpoint of threat analysis.

The program envisioned consists of an interdisciplinary R&D program with multiple contractors, and involving tasking of intelligence sources for data on Soviet Bloc efforts in this area. The R&D effort will have both classified and unclassified portions, and is to consist of three major areas:

¹⁰W.P. Zinchenko, A.N. Leontiev, B.M. Lomov, and A.R. Luria, "Parapsychology: Fiction or Reality?" Questions of Philosophy, Vol. 9, pp. 128-136, 1973.

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- (1) Basic research
 - (a) Theoretical
 - (b) Experimental
- (2) Operational tasking
- (3) Information dissemination
 - (a) Data collection
 - (b) Conferences
 - (c) Training programs

The major contractor in this area will be the Radio Physics Laboratory of SRI in Menlo Park, California. They are to serve a dual function: 1) carry out certain portions of the contracted R&D effort; and 2) chair the interagency and inter-contractor program efforts (e.g., conferences). The latter would follow procedures similar to that used with JASON, wherein SRI hosts meetings of scientists brought together to advise DOD personnel on technological advances of potential strategic significance. A breakdown of these various activities is provided below.

(1) Basic Research

To accomplish the proposed objective of evaluating the significance of NBIT processes for intelligence applications, it is necessary to develop a greater understanding of the basic mechanisms involved. Therefore, some part of program funding should be set aside for basic research, both experimental and theoretical.

(a) Theoretical

At the present time three basic models have been proposed to describe paranormal functioning on the basis of present theory or reasonable extensions of same. These are the ELF (extremely low frequency) electromagnetic hypothesis, the quantum correlation hypothesis, and the extra-dimensional hypothesis.

Briefly, the ELF hypothesis suggests that NBIT processes are carried by electromagnetic waves in the 300-1000 km wavelength region (300-1000 Hz).⁵⁻⁸ Experimental support for this hypothesis is claimed on the basis of slower than inverse square attenuation, low bit rates, and ineffectiveness of ordinary electromagnetic shielding, factors (among others) held in common between ELF and ESP. The quantum correlation hypothesis stems from the recognition that no theory of reality compatible with quantum theory can require spatially separated events to be independent,¹¹⁻¹³

¹¹D. Bohm and B. Hiley, "On the intuitive understanding of non-locality as implied by quantum theory," (Birkbeck College, London, England), Feb. 1974, Preprint.

¹²J.S. Bell, "On the problem of hidden variables in quantum theory," Rev. Mod. Phys., Vol. 38, No. 3, p. 447, July 1966.

¹³H. Stapp, "Theory of reality," Lawrence-Berkeley Lab. Rep. LBL-3837, Univ. California, Berkeley, April 1975.

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but must permit interconnectedness of distant events in a manner that is contrary to ordinary experience.^{14,15} (This prediction has been experimentally tested and confirmed in the recent experiments of Freedman and Clauser with regard to photon correlation.)^{16,17} The extra-dimensional hypothesis is based on the ideas of Targ (SRI) and Rauscher (LRL) pertaining to the use of extra spatial and temporal dimensions to provide a space-time metric especially suitable for describing NBIT processes.

The purpose of the theoretical studies is to provide a series of predictions around which experiments can be designed and thus provide for the necessary discrimination between competing models for NBIT mechanisms. Such work should be pursued by theoretical physicists and collated by SRI in its central clearing function. (Unclassified)

(b) Experimental

1. ELF Experiments

a. Carry out remote viewing experiments using electromagnetic and magnetic shielding, such as thick-walled or mu-metal chambers, or the shielded room at the MIT Magnet Lab, for the purpose of obtaining further information pertaining to the ELF hypothesis, the hypothesis favored in the USSR for all psychoenergetic phenomena.

b. Test remote sensing under conditions of shielding by water as provided by submersibles. (SRI in conjunction with other labs.)

c. Use ELF sources as targets in remote sensing, especially at 7.5 Hz and its harmonics, to test the earth-ionosphere waveguide hypothesis. (SRI)

d. Make use of ELF sources for jamming the remote viewing subject, in controlled double-blind experiments. (SRI)

e. Using the data base generated in the past SRI remote viewing experiments,^{1,2} look for potential correlations between success/failure, time of day, geomagnetic storm activity, sun spot activity, etc. (SRI) In particular, study correlation of remote sensing results with factors such as east-west asymmetry, geomagnetic disturbance (U index), and diurnal variations that are known to affect ELF propagation. (SRI)

¹⁴A. Einstein, B. Podolsky, and N. Rosen, "Can quantum-mechanical description of physical reality be considered complete?" Phys.Rev., Vol. 47, p. 777, May 15, 1935.

¹⁵R.H. Dicke and J.P. Wittke, Introduction to Quantum Mechanics. Reading, MA: Addison-Wesley, 1960, ch. 7.

¹⁶J.J. Freedman and J.F. Clauser, "Experimental test of local hidden variable theories," Phys. Rev. Lett., Vol. 28, No. 14, p. 938, Apr. 3, 1972.

¹⁷J.F. Clauser and M.A. Horne, "Experimental consequences of objective local theories," Phys. Rev. D, Vol. 10, No. 2, p. 526, July 15, 1974.

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2. Quantum Correlation Experiments

Experiments of interest for quantum correlated-state models shall be carried out with attention given to both directions of the channel (remote sensing and remote actuation). (SRI in conjunction with other labs, e.g., Univ. of California, Berkeley Physics Dept. - Unclassified)

3. Examination of Psychoenergetic Man/Machine Interaction

This should include a continuation of the work with a cryogenic magnetometer presently underway at SRI. A general search for other measurement processes sensitive to influence via the remote sensing channel shall be carried out as indicated by theoretical work. (SRI - Unclassified)

4. Physiological Correlates of Noncognitive Perception

In work at SRI and elsewhere,² it has been found that remote strobe-light flashing produces a reduction of EEG alpha activity in a shielded subject, even though the subject is unaware of any stimulus being present throughout the experiment. In this study EEG activity is observed to change in synchronism with the application of the remote stimulus. Suggest search for other physiological correlates such as GSR and Plethysmograph to obtain additional data on this passive arousal response. (SRI, SRI subcontract at Langley-Porter Neuropsychiatric Institute - Unclassified)

5. Signal-to-Noise Questions

Carry out detailed remote viewing experiments to measure the change in resolution capability as a function of distance, if such a functional dependence should be found.

a. SRI will endeavor to determine the characteristics of the remote sensing information channel in terms of bit rate, resolution, and other parameters of interest through work with gifted subjects and SRI-generated target materials.

b. A communication experiment involving redundancy coding to enhance the signal-to-noise ratio shall be conducted on the basis of the emergence of a remote sensing data channel of extra-chance quality.^{1,2} (SRI - Unclassified)

(2) Operational Tasking

Experiments shall be conducted under protocols established in close liaison with the client to determine the utility of the remote sensing phenomenon for acquisition and tracking of submersibles and other cooperative or uncooperative targets of interest designated by the sponsor.

(3) Information Dissemination

(a) Data Collection

The intelligence agencies responsible for collecting data on

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Soviet Bloc countries shall be tasked by the sponsor to provide information to the sponsor on Soviet efforts on NBIT R&D.

SRI, as part of its clearing house function, shall act as a central collection point for the collation and analysis of both foreign and domestic information relating to NBIT efforts, both classified and unclassified. Special purpose analysis requirements shall be forwarded to other organizations as required.

(b) Conferences

Semi-annual closed conferences will be chaired by SRI in which sponsors, contractors, and consultants will be brought together to maintain state-of-the-art knowledge in NBIT R&D, both at home and abroad. This is in addition to the usual meetings between subsets of those involved to maintain continual interchange as required.

For day-to-day update, a teletype terminal shall be placed at every contractor and sponsor location so that teleconferencing by computer can take place on a continual basis. Such computer teleconferencing provides the benefits of a message center that can be accessed at any time, in addition to multi-party teleconferencing. Teleconferencing programs of the type used in the ARPA net shall be employed, and will be supplied by SRI.

(c) Training Programs

Task SRI to

- record and specify the essential aspects of the training program used at SRI to obtain remote data as recorded in the previous experimental program.
- establish a program at SRI to train subjects in the client community to accomplish the various tasks relating to operational objectives.

The exploratory nature of the program requires that 15 percent of the overall effort will be set aside to explore, with the client's cognizance, avenues of research (other than those listed) that may surface as high-priority items during the course of the program.

Throughout the program, the various investigators are to remain in close communication with the client.

SRI is to provide approximately 36 man-months of professional effort including an appropriate subject pool and other support toward their role in the accomplishment of the foregoing.

Reporting Schedule

Three quarterly progress reports will be delivered the tenth day of each third contract month by all contractors. An SRI-collated final technical report will be delivered 13 months after commencement date of the contract.